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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,912	01/17/2002	Yong-Jun Lim	Q67327	3408

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SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, NW
Washington, DC 20037-3213

EXAMINER

SHAW, PELING ANDY

ART UNIT PAPER NUMBER

2144

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/046,912	LIM, YONG-JUN	
	Examiner	Art Unit	
	Peling A. Shaw	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,10,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10,14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Amendment received on 06/23/2006 has been entered into record. No claim is amended.

Claims 1-7, 9-10 and 14-15 are currently pending.

2. Amendment received on 11/14/2005 was entered. Claims 14-15 were new.

3. Amendment received on 03/15/2005 was entered. Claims 1, 4, 7 and 9 were amended.

Claims 2-3, 5-6 and 10 are original. Claims 8 and 11-13 were canceled.

Priority

4. This application claims a priority # Republic of Korea 2001-38804 on 06/30/2001. The filing date is 01/17/2002.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-7, 9-10 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by

Nelson, et al., (US 5568641 A), hereinafter referred as Nelson.

- a. Regarding claim 1, Nelson disclosed (in abstract, lines 6-14 and 18-20, column 1, line 36-45; column 2, lines 22-40, Fig. 1A and Fig. 2; column 4, lines 18-30) a network device (system) capable of upgrading software through a network, comprising:
monitoring means for monitoring at least one failure of the network device while the

software is being upgraded (Processor 20 is capable of these functions so that it can determine the status of a firmware upgrade and whether the upgrade was disrupted or not.); a first memory for storing data necessary for operating the network device (boot block); a second memory for storing information transferred through the network (new firmware downloaded and copied); a controller for performing control to store the information, which is downloaded through the network to upgrade the software, in the second memory, and store an old version of the software in an empty area of the first memory before the old version of the software stored in the first memory is upgraded with the information stored in the second memory (processor); and a decoder for selecting either the first memory or the second memory, which is used for upgrading the software, according to a control signal received from the controller and a result of monitoring received from the monitoring means, and setting an address (DECODE and NVMEMBIT, XOR, ADDRESS LINES).

- b. Regarding claim 2, Nelson disclosed (Fig. 1A; column 2, lines 22-49) the network device of claim 1, wherein the controller provides a control signal to the decoder to copy the old version of the software to the empty area of the first memory (alternate boot block), erase the old version of the software stored in an original area of the first memory (primary boot block), and copy the information stored in the second memory (new firmware) to the original area of the first memory (primary boot block).
- c. Regarding claim 3, Nelson disclosed (column 2, line 33-37; column 4, lines 18-30) the network device of claim 1, wherein the monitoring means monitors whether at least one failure occurs in a network device such as a power failure or hang-up of the

network device (Processor 20 is capable of these functions so that it can determine the status of a firmware upgrade and whether the upgrade was disrupted or not.).

- d. Regarding claim 5, Nelson disclosed (Fig. 1A; column 2, lines 15-19 and 23-28; column 4, lines 18-30) the network device of claim 1, wherein when the decoder receives a signal, indicating that at least one failure (Processor 20 is capable of these functions so that it can determine the status of a firmware upgrade and whether the upgrade was disrupted or not) has occurred, from the monitoring means while the software is being upgraded, the decoder returns to the initial state of the network device (alternate boot block).
- e. Regarding claim 6, Nelson disclosed (column 2, lines 15-19 and 23-28; column 4, lines 18-30) the network device of claim 5, wherein when at least one failure occurs while the old version of the software is being upgraded, after the old version of the software is copied to the empty area of the first memory, the decoder operates so that the network device can be restarted (NVMEBOOT, XOR) based on the old version of the software (alternate boot block containing the old primary boot information).
- f. Regarding claim 7, Nelson disclosed (in abstract, lines 6-14 and 18-20, column 1, line 36-45; column 2, lines 22-40, Fig. 1A and Fig. 2; column 4, lines 18-30) a network device (system) capable of upgrading software through a network, comprising: monitoring means for monitoring whether at least one failure of the network device occurs while the software is being upgraded (Processor 20 is capable of these functions so that it can determine the status of a firmware upgrade and whether the upgrade was disrupted or not.); a first memory for storing first data necessary for

operating the network device (primary boot block); a second memory for storing second data necessary for operating the network device (alternate boot block); a third memory for storing information transferred through the network (new firmware downloaded); a controller for performing control to store information, which is downloaded through the network to upgrade the software, in the third memory, and store a copy of an old version of the software in an empty area of the second memory before the old version of the software stored in the first memory is upgraded to the information stored in the third memory (processor); and a decoder for selecting one of the first memory, the second memory, and the third memory, which is used for upgrading the software, according to a control signal received from the controller and the result of monitoring received from the monitoring means, and setting an address (DECODE and NVMEMBIT, XOR, ADDRESS LINES).

- g. Claim 9 is of the same scope as claims 1 and 7. It is rejected for the same reasons as for claims 1 and 7.
- h. Regarding claim 10, Nelson disclosed (column 1, lines 45-57) the method of claim 9, wherein the at least one failure is a failure in the network device which is checked during the erasing and storing steps (considerations of power failure or other disruptions).
- i. Regarding claim 14, Nelson disclosed (column 3, lines 23-34) the network device of claim 1, wherein said second memory is a separate unit from said first memory (bank of separately addressable EEPROM devices).

- j. Regarding claim 15, Nelson disclosed (column 3, line 23-34) the network device of claim 7, wherein said second memory is a separate unit from said first memory (bank of separately addressable EEPROM devices).

Nelson disclosed all limitations of claims 1-3, 5-7, 9-10 and 14-15. Claims 1-3, 5-7, 9-10 and 14-15 are rejected under 35 U.S.C. 102(b).

6. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(a) as being anticipated by MITSUI, HITOSHI, (JP 2001117780 A), hereinafter referred as MITSUI.

- a. Regarding claim 1, MITSUI disclosed (in abstract, line 1-10) a network device (information storage device) capable of upgrading software, comprising monitoring means (accident due to update), a first memory (first flash PROM0), a second memory (second flash PROM1), a controller (information storage device), and a decoder (storage device).
- b. Regarding claim 4, MITSUI disclosed (in abstract, line 1-10) the further monitoring means on failure in the network (download method).
- c. Regarding claim 5, MITSUI disclosed (in abstract, line 1-10) the decoder and monitoring means detects one failure (accident due to download) and returns to the initial state (read from flash PROM0) of the network device.
- d. Regarding claim 6, MITSUI disclosed (in abstract, line 1-10) the decoder operates that the network device can be restarted (accident in a short time) based on the old version of the software (read from flash PROM0).

MITSUI disclosed all limitations of claims 1 and 4-6. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(a).

Art Unit: 2144

7. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by MATSUI et al., (JP 09138769 A), hereinafter referred as MATSUI.

- a. Regarding claim 1, MATSUI disclosed (in abstract, line 1-17) a network device (client) capable of upgrading software, comprising monitoring means (file judging means), a first memory (the old version in an original space on a disk), a second memory (the replacement software, the delivered software), a controller (server), and a decoder (software recovering means).
- b. Regarding claim 4, MATSUI disclosed (in abstract, line 9-10) the further monitoring means on failure in the network (the failure of delivery).
- c. Regarding claim 5, MATSUI disclosed (in abstract, line 1-10) the decoder and monitoring means detects one failure (the failure of delivery) and returns to the initial state (software recover) of the network device.
- d. Regarding claim 6, MATSUI disclosed (in abstract, line 9-17) the decoder operates that the network device can be restarted (software recovering instructing means) based on the old version of the software (return the software into the original state before delivery).

MATSUI disclosed all limitations of claims 1 and 4-6. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b).

8. Claims 1-3, 5-7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by TAKEO, KAZUNORI, (JP 10105407 A), hereinafter referred as TAKEO.

- a. Regarding claim 1, TAKEO disclosed (in abstract, line 1-16) a network device (central processing part) capable of upgrading software, comprising monitoring

means (fault monitoring part), a first memory (back-up memory and part of operation memory), a second memory (part of operation memory), a controller (autonomous program fault restoring system), and a decoder (storage part).

- b. Regarding claim 2, TAKEO disclosed (in abstract, line 6-16) the controller provides a control signal to the decoder to copy the old version of the software to the empty area of the first memory (back-up memory), erase the old version of the software stored in an original area of the first memory (operation memory), and copy the information stored in the second memory (down-load program) to the original area of the first memory (operation memory).
- c. Regarding claim 3, TAKEO disclosed (in abstract, line 4-5) monitoring means on power failure or hang-up (fault occurs due to the program).
- d. Regarding claim 5, TAKEO disclosed (in abstract, line 1-10) the decoder and monitoring means detects one failure (fault occurs due to the program) and returns to the initial state (software recover) of the network device.
- e. Regarding claim 6, TAKEO disclosed (in abstract, line 3-5 and 10-12) the decoder operates that the network device can be restarted based on the old version of the software (transfer operation program preserved in back-up memory).
- f. Regarding claim 7, TAKEO disclosed (in abstract, line 11-33) a network device capable of upgrading software, comprising monitoring means, a first memory (part of operation memory), a second memory (back-up memory), a third memory (part of operation memory), a controller, and a decoder.

Art Unit: 2144

- g. Regarding claim 9, TAKEO disclosed (in abstract, line 1-11) checking one failure (fault occurs due to the program) during the upgrade, to operate according to the new software (down-loaded program is executed) or old software based upon (restarting) if a failure occurs, downloading the new version of the software through the network and storing the new version of the software in a second memory of the network device (back-up memory), copying the old version of software in a first area (part of operation memory) to a second area (preserved in a back-up memory), erasing the old software in the first area, storing the new software in the first area.
- h. Regarding claim 10, TAKEO disclosed (in abstract, line 9-13) checking (abnormality) during erasing and storing steps.

TAKEO disclosed all limitations of claims 1-3, 5-7 and 9-10. Claims 1-3, 5-7 and 9-10 are rejected under 35 U.S.C. 102(b).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson, et al., (U.S. Patent Number 5,568,641), hereinafter referred as Nelson as applied to claim 1 above, and further in view of Kurihara, Nobumasa, (JP411328040A), hereinafter referred as Kurihara.

- a. Nelson shows claim 1 as above. Nelson does not show the monitoring means on failure in the network. However, Nelson does show the consideration of both power failure and other disruption during the firmware upgrade.
- b. Kurihara shows (in abstract, line 3-5) the monitoring means on failure in the network (download fault from higher order station to base station) in an analogous art for the purpose of memory readout control.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Nelson's functions of powerfail durable flash EEPROM upgrade to include Kurihara's functions of checking download fault.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to include the network failure consideration in the download phase of firmware (or any software) upgrading per Kurihara's teaching to facilitate a better upgrade process management.

Together Nelson and Kurihara disclosed all limitations of claim 4. Claim 4 is rejected under 35 U.S.C. 103(a).

Response to Arguments

10. Applicant's arguments filed on 06/23/2006 have been fully considered, but they are not persuasive.

- a. Examiner has reviewed applicant's argument with respect to the current claim language, the applied prior arts, previous applicant's arguments and responses. Examiner has found that the previous responses to previous applicant's arguments still apply. In addition examiner offers the following responses to applicant's current arguments.
- b. Regarding claim 1, applicant has argued (2nd paragraph on page 3) that the use of two memories is not simply a matter of a designer's decision, as using two memories can be advantageous and should be given a patentable weight. Examiner would agree if there is particular way of using two memories that is different from well known to one skill in the art. As applicant admit that is not only designer's decision ... Thus it seems that applicant admits that using two memories is common. As disclosed in applicant's original specification (lines 8-13 on page 4) "Preferably, the upgrading of software includes the steps of downloading the new version of the software through the network, copying the old version of the software stored in a first area of the network device to a second area of the network device, erasing the old version of the software from the first area of the network device, and storing the new version of the software in the first area." It does suggest either separate memory areas or some kind of memory division could be used to achieve the claimed invention. Applicant does continue to describe, as in the claim language, using 1st and 2nd memories, however it

is examiner's reading that using 1st and 2nd memories is for describing the invention.

As long as the function intended is described as is also covered by the cited art, i.e.

Nelson, then the fact is if using two memories or one memory will make difference

that does not seem to be the intended invention. As for the benefit of using two

instead of one per applicant's statement is not conclusive, thus there is no evidence

showing that using two memories is patentable in current application.

- c. Applicant has further argues (last paragraph on page 3) that there is no teaching that would be two distinct memories: one for storing data necessary for operating the network device and the other for storing information transferred through the network. Examiner has reviewed Nelson and found (Fig. 1A or Fig. 1B) that the function block "DECODE" is for chip select. That is definitely an indication of multiple memories that are used (or memory blocks as per Nelson).
- d. Applicant's argument on claim 2 (2nd paragraph on page 4) is based upon the argument on claim 1. The above response to applicant's argument on claim 1 should apply. Examiner did address applicant argument on claim 2 per item d in section 9 and per item a in section 10.
- e. Applicant further argued (last paragraph on page 4) that examiner's statement using well known in supporting a rejection. However, Nelson is the art to support examiner's statement of well known with a specific statement suggesting the teaching.
- f. Applicant states (2nd paragraph on page 5) that Mitsui does not show a network. Applicant has suggested that the download could be via a cable. Examiner did search

and review the Mitsui's mechanical translated specification and found the reference of download through telephone line.

- g. Applicant states (last paragraph on page 5) that Matsui does not show memories and controller. Examiner has reviewed the claim rejection with respect to Matsui and applicant's previous arguments and examiner's previous responses, and will keep the rejections and use the previous responses.
- h. Applicant states (3rd paragraph on page 6) that Takeo does not show a network. Applicant has suggested that the download could be via a cable. Examiner did search and review the Takeo's mechanical translated specification and found the reference of download through telephone line.
- i. It is the Examiner's position that Applicant has not submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art. As it is Applicant's right to claim as broadly as possible their invention, it is also the Examiner's right to interpret the claim language as broadly as possible. It is the Examiner's position that the detailed functionality that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique (see each item a in sections 4 to 7). The firmware update seems to be a well known art as it is applied in network or non-network environment per Nelson, Mitsui, Matsui, Takeo's teachings. To claim an invention, applicant must be able to submit claim language to distinguish over the prior arts used in the above rejection sections that discloses distinctive features of Applicant's claimed invention. It is suggested

that Applicant compare the original specification and claim language with the cited prior art used in the rejection section above to draw a distinct claim set to further the prosecution.

- j. Failure for Applicant to narrow the definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant's intent to broaden claimed invention. Examiner interprets the claim language in a scope parallel to the Applicant in the response. Examiner reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Conclusion

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

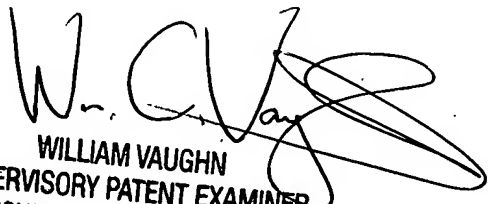
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 2144

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100